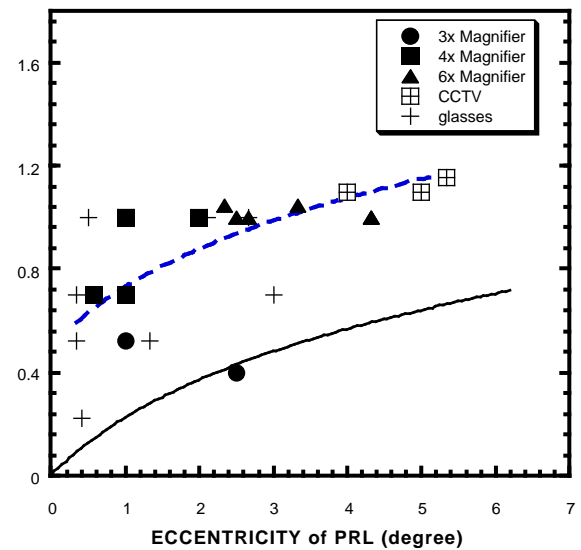


READING MAGNIFIERS PREFERRED BY PATIENTS WITH AGE-RELATED MACULAR DEGENERATION ((K. Fujita¹, K. Oda², M. Naruse¹, A. Ogawa¹, M. Yuzawa¹)) ¹Nihon University, Surugadai Hospital, Dept. of Ophthalmology; ²Tokyo Woman's Christian Univ., Dept. of Communication, Tokyo, JAPAN.

PURPOSE: To investigate into the relationship between visual functions and preferred reading magnifiers in patients with age-related macular degeneration (AMD) in both eyes. Among visual functions, we are especially interested in the best visual acuity, the preferred retinal locus (PRL), and the light sensitivity at PRL. **METHOD:** Twenty seven patients with AMD in both eyes (aged 74 ± 5) participated in this research. Their AMD were all in scar stage. We evaluated (1). eccentricity of their PRL, (2). light sensitivity at the PRL with scanning laser ophthalmoscope microperimetry, in addition to (3). visual acuity with Landolt-rings. To all patients we introduced hand magnifiers of 3x, 4x, and 6x, closed circuit television (CCTV) and spectacle glasses for closer reading distance as reading aids. They were allowed to try them and selected one magnifier by their own criteria. Each patient's choice was recorded together with her/his visual functions. **RESULT:** In average, visual acuity for better eyes was 0.83 ± 0.25 logMAR, PRL was at the eccentricity of 2.10 ± 1.10 degrees, where the light sensitivity was 19 ± 5 dB. As shown in the figure, with one exception, their visual acuity was about 0.5 logMAR worse than the prediction by the cortical magnification factor of the normally sighted (shown with solid line). This decreased functioning could not be explained by the light sensitivity data ($r=0.2$, ns). Reading aids selected by each patient were plotted in different symbols in the figure, which showed; (1). CCTV was preferred by the patients of lower acuity and larger eccentricity for PRL (>1.0 logMAR, > 4 degrees; $p<0.05$), (2). glasses were chosen by those whose PRL was closer to the fovea regardless of visual acuity, (3). power of hand magnifiers was dependent on PRL eccentricity ($r=0.73$) as well as visual acuity ($r=0.77$). **CONCLUSION:** Visual acuities at PRL in AMD patients were lower than prediction from the cortical magnification factors. Preferred reading magifiers chosen by these patients show a systematic dependence on one's residual visual functions, especially visual acuity and eccentricity of PRL.



Visual Function and Preferred Reading Aids in AMD Patients